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 THE ESTIMATED COST FOR THIS REQUEST IS 23.24 U.S. DOLLARS
 DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L6 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2009:1138736 CAPLUS
 DOCUMENT NUMBER: 151:344965
 TITLE: Surface modification of nitinol by using abrasive
 blasting for dopant impregnation
 INVENTOR(S): O'Donoghue, John Gerard; O'Hare, Peter
 PATENT ASSIGNEE(S): Enbio Limited, Ire.
 SOURCE: PCT Int. Appl., 47pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

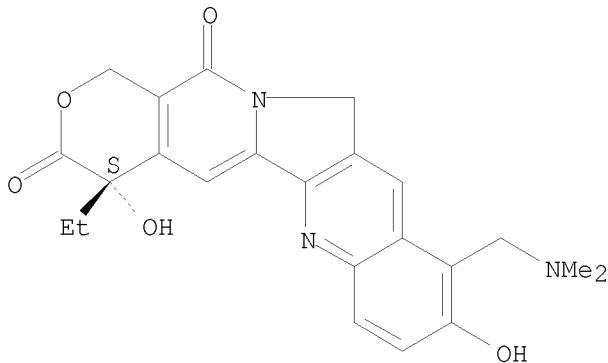
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2009112851 | A1 | 20090917 | WO 2009-GB702 | 20090313 |
| W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |

PRIORITY APPLN. INFO.: US 2008-36109P P 20080313

AB Disclosed herein are methods of modifying a nitinol surface by using abrasive blasting techniques. The surface modification can be performed by abrasively blasting the surface and delivering at least one dopant from one or more fluid jets to cause the at least one dopant to impregnate and/or coat the nitinol surface. The nitinol surface can form a portion or all of a medical device, such as an implantable medical device, e.g., a stent. Thus, nitinol stents were surface modified by delivering hydroxyapatite as the dopant in one particle stream and alumina bead as the abrasive in a sep. particle stream using a twin micro-blaster setup.

IT 123948-87-8, Topotecan
 RL: TEM (Technical or engineered material use); THU (Therapeutic use);
 BIOL (Biological study); USES (Uses)
 (surface modification of nitinol by using abrasive blasting for dopant impregnation)
 RN 123948-87-8 CAPLUS
 CN 1H-Pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione,
 10-[(dimethylamino)methyl]-4-ethyl-4,9-dihydroxy-, (4S)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2007:435932 CAPLUS
 DOCUMENT NUMBER: 146:428594
 TITLE: Novel crystalline form of topotecan hydrochloride
 INVENTOR(S): Pathi, Srinivas Laxminarayan; Kanathala, Shashi Rekha; Gangrade, Manish Gopaldas; Kankan, Rajendra Narayanrao; Rao, Dharmaraj Ramachandra
 PATENT ASSIGNEE(S): Cipla Limited, India; Curtis, Philip Anthony
 SOURCE: PCT Int. Appl., 18pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2007042799 | A1 | 20070419 | WO 2006-GB3768 | 20061010 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| IN 2005MU01274 | A | 20070629 | IN 2005-MU1274 | 20051010 |
| US 20070105885 | A1 | 20070510 | US 2006-539932 | 20061010 |
| EP 1943253 | A1 | 20080716 | EP 2006-794718 | 20061010 |
| R: DE, FR, GB, TR | | | | |
| KR 2008068052 | A | 20080722 | KR 2008-711144 | 20080509 |
| PRIORITY APPLN. INFO.: | | | IN 2005-MU1274 | A 20051010 |
| | | | WO 2006-GB3768 | W 20061010 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention relates to a novel crystalline form of topotecan hydrochloride, and methods of making the same. Thus, 10.0 g of topotecan hydrochloride pentahydrate was suspended in 100 mL of methanol and stirred at

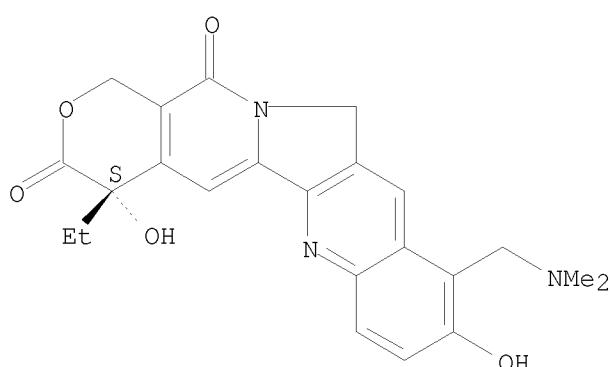
25-30° for 1 h and further chilled to 10-150° and stirred for 1 h at 10-15°C. The resulting solid was filtered and washed with 5 mL of methanol. The solid was dried in vacuum at 25-30° for 5 h, followed by drying at 30-35° C for 36 h to get 6.0 g of Form 'A'.

IT 119413-54-6, Topotecan hydrochloride 123948-87-8,
Topotecan
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
(Uses)
(novel crystalline form of hydrochloride topotecan)

RN 119413-54-6 CAPLUS

CN 1H-Pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione,
10-[(dimethylamino)methyl]-4-ethyl-4,9-dihydroxy-, hydrochloride (1:1),
(4S)- (CA INDEX NAME)

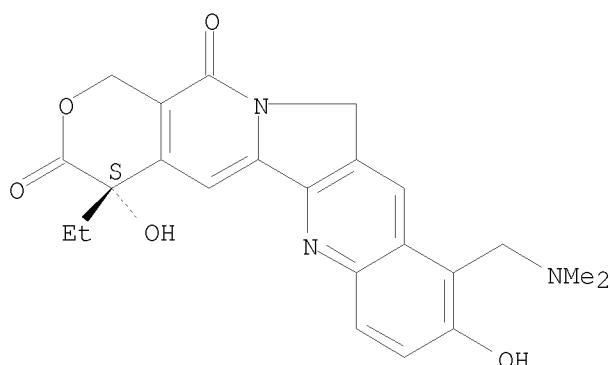
Absolute stereochemistry.



● HCl

RN 123948-87-8 CAPLUS
CN 1H-Pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione,
10-[(dimethylamino)methyl]-4-ethyl-4,9-dihydroxy-, (4S)- (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

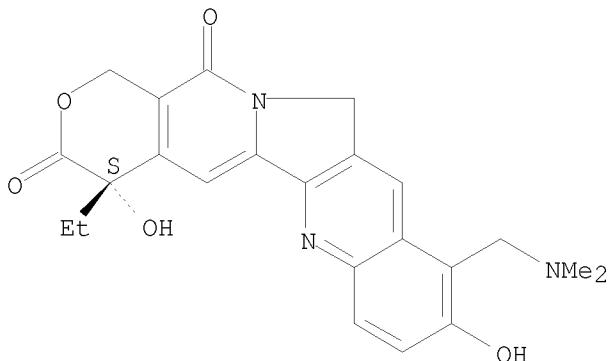
L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2006:160304 CAPLUS
 DOCUMENT NUMBER: 144:318801
 TITLE: A study of variable hydration states in topotecan hydrochloride
 AUTHOR(S): Vogt, Frederick G.; Dell'Orco, Philip C.; Diederich, Ann. M.; Su, Qiaogong; Wood, Jeffery L.; Zuber, Gary E.; Katrincic, Lee M.; Mueller, Ronald L.; Busby, David J.; DeBrosse, Charles W.
 CORPORATE SOURCE: GlaxoSmithKline plc., Chemical and Pharmaceutical Development, King of Prussia, PA, 19406, USA
 SOURCE: Journal of Pharmaceutical and Biomedical Analysis (2006), 40(5), 1080-1088
 CODEN: JPBADA; ISSN: 0731-7085
 PUBLISHER: Elsevier B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Topotecan hydrochloride, a pharmaceutical compound developed as a treatment for cancer, exhibits variable hydration states in a crystalline solid form chosen for manufacturing. This variability requires addnl. controls for successful development, and presents a characterization and detection challenge for anal. methods. In this study, overall water content was determined by Karl Fischer titration and thermogravimetric anal. (TGA) on topotecan HCl equilibrated at different relative humidity levels. These results, when combined with information obtained from dynamic water vapor sorption and differential scanning calorimetry (DSC), indicate that this form of topotecan HCl contains 3 mol of water integral to the crystalline structure and up to two addnl. moles of water depending on the relative humidity. Powder x-ray diffraction expts. did not detect significant differences in topotecan HCl samples equilibrated at trihydrate and pentahydrate states, and showed that the crystal lattice dimensions are not affected unless the form is dried below the trihydrate state. This behavior is typical of crystal structures with channels that can accommodate addnl. loosely bound water. To study the role of the loosely bound water in the crystal structure in more detail, solid-state ¹³C and ¹⁵N NMR were used to examine the differences between the hydration states. Both the trihydrate and pentahydrate states yielded similar solid-state NMR spectra, consistent with the lack of change in the crystal lattice. However, minor but readily detectable differences in the ¹³C spectra are observed with changes in water content. Interpretation of these data suggests that the loosely bound channel water is hydrogen-bonding to specific portions of the topotecan parent mol. Topotecan HCl trihydrate was hydrated with D₂O vapor to confirm the nature and location of the channel water using ¹³C and ²H solid-state NMR. Despite the detectable association of the channel water with hydrogen bonding sites on the topotecan mol., ²H quadrupolar echo expts. indicate that the channel water is highly mobile at room temperature and at -60°.

IT 119413-54-6, Topotecan hydrochloride
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (variable hydration states in topotecan hydrochloride)

RN 119413-54-6 CAPLUS
 CN 1H-Pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione, 10-[(dimethylamino)methyl]-4-ethyl-4,9-dihydroxy-, hydrochloride (1:1), (4S)- (CA INDEX NAME)

Absolute stereochemistry.



● HCl

OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:451134 CAPLUS
DOCUMENT NUMBER: 142:487518
TITLE: Preparation of novel crystalline form of topotecan monohydrochloride pentahydrate for treatment of viral and cancer-related diseases
INVENTOR(S): Dell'orco, Philip C.; Diederich, Ann Marie; Su, Qiaogang; Wood, Jeffrey Lee
PATENT ASSIGNEE(S): Smithkline Beecham Corporation, USA
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 2005046608 | A2 | 20050526 | WO 2004-US37626 | 20041112 |
| WO 2005046608 | A3 | 20051103 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2004289318 | A1 | 20050526 | AU 2004-289318 | 20041112 |
| CA 2545876 | A1 | 20050526 | CA 2004-2545876 | 20041112 |
| EP 1689400 | A2 | 20060816 | EP 2004-810731 | 20041112 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |

| IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR, IS, YU | | | | |
|--|----|----------|------------------|------------|
| CN 1913897 | A | 20070214 | CN 2004-80040300 | 20041112 |
| BR 2004016366 | A | 20070313 | BR 2004-16366 | 20041112 |
| JP 2007510751 | T | 20070426 | JP 2006-539849 | 20041112 |
| RU 2352572 | C2 | 20090420 | RU 2006-120422 | 20041112 |
| IN 2006DN02454 | A | 20070413 | IN 2006-DN2454 | 20060502 |
| ZA 2006003508 | A | 20080227 | ZA 2006-3508 | 20060503 |
| US 20070117832 | A1 | 20070524 | US 2006-578660 | 20060509 |
| KR 2006122847 | A | 20061130 | KR 2006-709179 | 20060511 |
| MX 2006005378 | A | 20060714 | MX 2006-5378 | 20060512 |
| NO 2006002616 | A | 20060712 | NO 2006-2616 | 20060607 |
| PRIORITY APPLN. INFO.: | | | US 2003-519160P | P 20031112 |
| | | | US 2003-524574P | P 20031124 |
| | | | WO 2004-US37626 | W 20041112 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Disclosed is a novel crystalline form of topotecan monohydrochloride pentahydrate, corresponding pharmaceutical compns., methods of preparation and/or use thereof to treat viral and/or cancer-related diseases. For example, topotecan monohydrochloride (6.00 kg) was dissolved in a mixture of acetone (50.4 L, 8.4 vols.) and 0.05 N HCl (26.1 L, 4.4 vols.) by heating to 58°. The resulting solution was cooled at a rate of about 1°/min, with stirring, to 40°, seeded with topotecan monohydrochloride pentahydrate seed material (5.9 g), and held at 35° for 1 h, during which time crystallization occurred. The resulting slurry was cooled to 0° at a rate of about 0.25°/min. The reaction product, topotecan monohydrochloride pentahydrate, was isolated by filtration and dried at 32° and -0.76 barG for 62 h while passing a vigorous stream of nitrogen through the vessel to yield 4.597 kg.

IT 119413-54-6, Topotecan hydrochloride

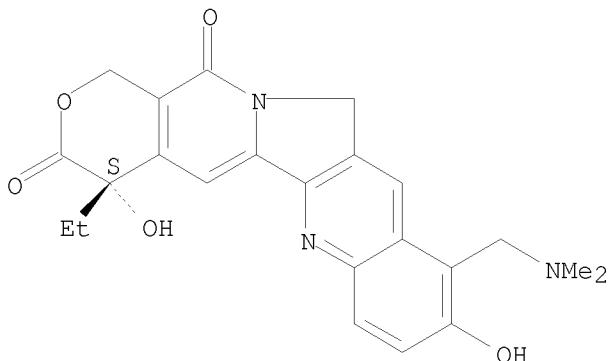
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

(preparation of crystalline form of topotecan monohydrochloride pentahydrate for treatment of viral and cancer-related diseases)

RN 119413-54-6 CAPLUS

CN 1H-Pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione, 10-[(dimethylamino)methyl]-4-ethyl-4,9-dihydroxy-, hydrochloride (1:1), (4S)- (CA INDEX NAME)

Absolute stereochemistry.



● HCl

10/578,660

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
(1 CITINGS)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L6 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
RE CITED REFERENCES
(1) Enbio Ltd; WO 2008033867 A 2008 CAPLUS
(2) Hossainy Syed F; US 20050238686 A1 2005
(3) Lee Michael J; US 20070288084 A1 2007
(4) Pacetti Stephen D; US 6663664 B1 2003
(5) Stinson Jonathan Swift; US 20030028241 A1 2003
(6) Wu Steven Z; US 6805898 B1 2004 CAPLUS

L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN
RE CITED REFERENCES
(1) Chen, M; CHINESE JOURNAL OF BIOCHEMICAL PHARMACEUTICS 2005, V26(5), P279
CAPLUS
(2) Diederich, A; WO 2005046608 A2 2005 CAPLUS
(3) Vogt; JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS 2006, V40(5), P1080
CAPLUS

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FILE 'REGISTRY' ENTERED AT 15:37:20 ON 12 JAN 2010
E TOPOTECAN/CN

L1 1 S E3
L2 1 S E5
L3 2 S L1 OR L2

FILE 'CAPLUS' ENTERED AT 15:38:16 ON 12 JAN 2010

L4 2884 S L3
L5 6604 S PENTAHYDRATE?
L6 4 S L4 AND L5

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